CURRICULUM VITAE

Name: Estuardo J. Miranda, M.S.

Occupation: Forensic Scientist-3

Employer: Washington State Toxicology Laboratory

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EDUCATION

Arizona State University, Tempe AZ

1996 Master of Science in Zoology

Arizona State University, Tempe AZ

Major: Bachelor of Science in Chemistry with emphasis in Biochemistry 1993

1993 Minor: Zoology

EMPLOYMENT HISTORY

Forensic Scientist 3 6/2001-Present

Washington State Toxicology Laboratory

• Analyze biological specimens for common drugs of abuse and alcohol in DUI and death investigations.

- Prepare simulator external standard solution for use with the BAC Datamaster.
- Interpret results from analytical instrumentation (*i.e.* GC/MS).
- Testify in courts of law as an expert witness in alcohol and drug related issues, including pharmacology and effects.
- Perform regular maintenance of instrumentation.
- Prepare scientific examination reports

Criminalist 1998-5/2001

Arizona Department of Public Safety Crime laboratory (Toxicology unit)

- Analyzed biological specimens for alcohol and common drugs of abuse in DUI investigations. Interpreted results from analytical instrumentation and prepared scientific examination reports.
- Testified in courts of law as an expert witness in alcohol and drugs of abuse related issues, including pharmacology, effects and retrograde calculations.
- Trained new criminalists and officers including drug recognition experts (DRE)

Research Technologist Carl T. Hayden VA Medical Center 1997-1998

Investigated the role of lipoproteins in cardiovascular disease.

Graduate Research/Teaching Assistant 1993-1996 Arizona State University

- Designed original research project in membrane physiology and conducted all data collection using various biochemical techniques.
- Taught laboratories in 1) Human anatomy and Physiology and 2) Basic Physiology, employing preserved and live animals including live animal surgeries.

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LICENSES AND CERTIFICATIONS

- Washington State Blood Alcohol Analyst, issued 7-31-01.
- Arizona Department of Health Services Lab Analyst Permit #232 (expired 2001)

PARTICIPATION IN PROFICIENCY PROGRAMS

- Blood Alcohol: California Association of Pathologists
 - U.S. Department of Transportation
 - Wisconsin State Laboratory of Hygiene
- Drug analysis: California Association of Pathologists

PROFESSIONAL MEMBERSHIPS

California Association of Toxicologists, Associate Member

PUBLICATIONS

- The effect of acclimation temperature on the fusion kinetics of lipid vesicles derived from endoplasmic reticulum membranes of rainbow trout (*Onchorhynchus mykiss*) liver. Comparative Biochemistry and Physiology Part A 131 (2002) 275-286.
- Temperature induced changes in the transbilayer distribution of phosphatidylethanolamine in mitoplast of rainbow trout (*Onchorhynchus mykiss*) liver. <u>Journal of experimental Zoology</u>, 1996, 274:23-32.
- Reported Death by Ingestion of 2,4-Dinitrophenol. <u>Journal of Analytical Toxicology</u>, 2003, 27:192-193 (Abstract).

CONTINUING EDUCATION AND TRAINING:

- April 14-16, 2004 National Highway Traffic Safety Administration (NHTSA) DWI
 Detection and Standardized Field Sobriety Testing. Instructed by Tom Bacon and Ed
 Harris from Seattle Police Department. Seattle Police training division in Seattle,
 Washington.
- October 20-24, 2003- Annual meeting of Society of Forensic Toxicologists in Portland, Oregon.
 - Workshop 6 Feeling Blue? Antidepressant workshop
- March 27-29, 2003 Annual meeting of Canadian Society of Forensic Science Drugs and Driving workshop – The A-Z of Marijuana Drugs and Driving workshop – Chemical Drugs and the Rave Culture
- October 136-17, 2002 Annual meeting of Society of Forensic Toxicologists in Dearborn, Michigan.
 - Workshop 2 *Pharmacogenomics*
 - Workshop 3 Forensic Toxicological Aspects of Human Growth and Development
 - Workshop 6 Pharmacology and Toxicology of Brain Drugs
 - Workshop 8 *Medicolegal Death Investigation*
- November 16, 2000 Workshop: The science of Solid Phase Extraction. Presented by Michael Telepchak, President and CEO of United Chemical Technologies, Inc. Phoenix, AZ.
- October 2-6, 2000 Annual meeting of Society of Forensic Toxicologists in Milwaukee, WI.
 - Workshop 3 Benzodiazepines: Pharmacology and Analytical Challenges.
 - Workshop 5 Marijuana Forensic Symposium

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- December 3-6, 1999 Short Course: *Mass spectrometry and spectral interpretation*. Instructed by Dr. Henry Nowicki from Professional Analytical and Counseling Services Inc. (PACS). San Francisco, CA.
- October 1999 Seminar: *Comprehensive Gas Chromatography Training*. Presented by Paul Silvis and Christine Vargo from *RESTEK*. Phoenix, AZ.
- August 1999 California Association of Toxicologists, Quarterly Meeting. Las Vegas, NV.
- June 1999 *Effective Testifying skills seminar*. Presented by Paul and Sandra Sovinski of Stars Inc. Phoenix, AZ.
- January 1999 National Highway Traffic Safety Administration: *Drug Evaluation and Classification Course "Drug Recognition Expert School"*. Phoenix, AZ.
- December 6-11,1998 Test for BAC in Highway Safety Programs *Supervision and expert Testimony*. Indiana University, Center for Studies of law in Action. Dr. Robert F. Borkenstein, Director. Bloomington, IN.
- 11/98-9/99 Urine Drug Screen Enzyme Multiplied Immunoassay Technique (EMIT) and Gas chromatography/mass spectrometry (GC/MS) Training program by Arizona Department of Public Safety, Crime Laboratory. Phoenix, AZ.
- 2/4-98 Forensic Blood Alcohol Training Program by Arizona Department of Public Safety Crime Laboratory. Phoenix, AZ.

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